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CODIB-D-98/3
11 October 1962

UNITED STATES INTELLIGENCE BOARD
COMMITTEE ON DOCUMENTATION

Trip Report: CODIB Visit to Germany

Attached for the record, is a report of CODIB attendance at the IFIP Congress 62 in Munich from 27 August - 2 September 1962, and subsequent visits to EUCOM installations.

[Redacted Signature Box]

in Paul A. Borel
Chairman

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Attachment



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CODIB Visit to Germany

27 Aug - 5 Sept 1962

I. IFIP Congress 62 (International Federation for Information Processing),
Munich, Germany, 27 August - 1 September 1962.

1. CODIB attendees included: Paul A. Borel (CIA, Chairman); Lowell R. Dailey (DOD/DDR&E); John F. Kullgren (Army/OACSI); Capt. Donald F. Seaman, USN (ONI), Dan B. Dyer (USAF/AF CIN); Maj. Wallace R. Smith (USAF/AFSC); Dr. Samuel N. Alexander (NBS); [redacted]

[redacted]

2. Congress attendees numbered 2600 from 41 countries, including the Soviet Bloc. Formal presentation (often in 4-6 parallel sessions), symposia, and panel discussions were held in the Technische Hochschule; opening and closing sessions and an equipment display (IFIP Interdata) were held at the Ausstellungspark. Social events included a party at the Löwenbräukeller; opera (The Abduction from the Seraglio-Mozart) at the Altes Residenztheater; banquet at the Hotel Bayerischer Hof; and excursion to Innsbruck via Lake Starnberg, Garmish-Partenkirchen, and Mittenwald, with return via Kufstein.

3. An exhibition of relevant books and periodicals was held in the Technische Hochschule. Preprints and abstracts of papers presented were obtained and, along with the Program, List of Participants, titles of books exhibited, list of manufacturers represented at Interdata, and other related literature, are available in the ADP Collection of the CIA Library. Conference Proceedings will be published by the North-Holland Publishing Company of Amsterdam early in 1963. The next Congress will be held in New York City in May 1965.

4. Languages of the Congress were English and French; simultaneous translation channel phones provided a choice of these two plus German and Russian. A fair amount of session-hopping was done by CODIB attendees to get as broad a view of the Congress as possible. Sessions attended in toto or in part included:

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Automata Theory; Fast Memory Technology; System Design; Coding Theory; Modern Techniques of Language Translation; Advanced Methods of Information Storage and Retrieval; Pattern Recognition; Semantics and Syntactics; Artificial Intelligence; Machine Learning; Programming Languages; Languages for Processor Construction; Biological and Psychological Aspects of Pattern Recognition; Programming Languages and Their Processing; Real-Time Information Processing; Information Retrieval; Linguistic Analysis and Mechanical Translation of Languages; Digital Communication; and Artificial Perception.

5. No detailed summary of all the individual papers heard will be attempted here; the pre-prints and abstracts are available. Over-all impression was that of a preponderance of U.S. delegates and clear U.S. dominance in the field, but with a massive potential developing in many other countries and with a growing awareness of the need for education in the field, as reflected by the establishment of a Chair for Information Processing at the Technische Hochschule, and plans to encourage inclusion of this subject in the students' curricula, as well as the establishment of a new IFIP Technical Committee on Education. Nothing of startling consequence was noted, but several individual papers were of interest in their presentations of theory (automata, coding, artificial intelligence, switching, etc.) or of experimentation (pattern recognition, programming, etc.) directly related to Community problems. Perhaps most disappointing was the lack of challenging comment on information retrieval and on linguistic analysis; also there was over-emphasis on computer aspects of information retrieval. Most controversial, as expected, was Prof. Bar-Hillel of Israel on mechanical translation, and most phlegmatic, again as expected, was A. A. Dorodnitsyn of the USSR (although one source felt that he was more frank in the presentation of his own paper than might have been expected [see OO-B-3, 236, 377, 21 Sept 62]).

6. The Automata Theory session was an extremely technical one, including discussion of idealized automata, Turing machines, multi-plexed and restored nan (not/and) (see paper by A. W. Burks, USA), relieved in part by a highly articulate presentation by L. J. Fogel, also of the U.S. His main point was to concentrate on information from the present and recent past and less on older material, for in the real world descriptors change with changing experience; such an approach, he feels, allows for predictability. Coding Theory was concerned mainly with error detection and correction in communications, with Van Duuren of the Netherlands

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scoffing somewhat at the younger authors, stressing as a first step the need for the mathematicians to translate theory to language understandable to engineers. The Artificial Intelligence session was quite good, the effusiveness of V. M. Glushkov of the Computer Center of the Ukrainian Academy of Sciences being one of the surprises N.B. His paper and subsequent comments, however, were translated by E. M. Zaitseff of the University of Michigan although Z. said Glushkov understood English very well. Glushkov referred to another of his papers on self-organizing systems, published in the Journal of Computational Mathematics in 1962, and to published proceedings of a 1962 Kiev Symposium on Self-Organizing Theory. He stated that machine translation (MT) work was being done in his center and that a character-reading device using a photomultiplier had been developed; he did not elaborate on this device, saying it would more appropriately be covered in the session on pattern recognition.*

7. The Programming Language session was disappointing, particularly since A. P. Yershov of the USSR, who was to have spoken on "Proposed Extension to ALGOL-60" did not show nor, in other sessions, did V. A. Kovelevskiy, I. A. Melchuk, O. P. Kuznetsov, O. F. Kulagina, A. A. Abramov, or A. A. Spirin;** A. A. Timofeyev was the third Soviet author present and read his paper in Russian without follow-up discussion, Dorodnitsyn likewise read Kulagina's paper and would not discuss it. The session on Biological and Psychological Aspects of Pattern Recognition was interesting in its reflection of experimental work being done on stimulus generalization and symbol recognition in animals. Papers by T. Sakai of Japan on phonetic typewriter and by L. D. Earnest of the U.S. (MITRE Corp. and SCIPS) on machine recognition of cursive writing were well received in the session on Artificial Perception.

8. In the equipment exhibit, the only really interesting items noted were a Siemens & Halske AG 1500 line/minute printer and a Compagnie des Machines Bull (Paris) analog-digital character recognition device.

* It was not; however, see the brief discussion of pattern recognition work by V. A. Kovelevskiy of the Ukrainian Academy of Sciences Computing Center, using a Kiev computer with flying spot scanner suggested by Glushkov: In: Current Research and Development in Scientific Documentation, No. 10, Item 5.1.8 (National Science Foundation, May 1962)

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9. As always at such gatherings, new contacts developed in the off-hours, particularly with U.S. company representatives who may be able to contribute to the solution of individual problems in the Community's various systems.



11. In connection with the phase-out of CIA support for the Georgetown MT Project, the Chairman also visited the Project's office in Frankfurt. This is a well organized key punch center, now running at a rate two-thirds of its two million words per month. The preparation of input is now primarily from Russian to English, in the field of atomic physics, for EURATOM.

II. USAREUR Briefings

A. Stuttgart

1. The CODIB group (minus Mr. Dailey, who returned to Washington) left Munich on 31 September for Stuttgart, arriving for lunch at the Ludwigsburg Officers' Club, then were briefed for 2 1/2 hours on the Central Registry files by Lt. Col. Epp and Maj. McCharcen. Other Service personnel included Lt. Col. Frank Perkins of the 513th IC Gp (recently assigned from Ft. Holabird) and Col. Evans, the Commanding Officer.

2. The 4.5 million biographic card file is a manual operation of significance in the CI world. Past cost estimates on conversion to machine language have been too high to justify undertaking the task; in addition the system operators evidently feel that the manual system is operating pretty well. They have only recently started a project of grouping surnames, physically interfiling by group rather than by straight alphabetical arrangement.

B. Heidelberg

1. Arrival in Heidelberg at 1930 was followed by dinner at the Patrick Henry Officers' Club and billeting at the Mark Twain Transient Hotel. Project

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Officer Major Cassell escorted the group to the USAREUR Intelligence Division conference room on 4 September for an all-day briefing, summarized below.

2. After welcoming remarks by Col. Davis, acting for Col. Donaldson, an organization and mission presentation was made by Lt. Col. Linden, followed by a collection sources briefing (refugees, legal travelers, border crossings) by Major Roth. Lt. Col. McKenzie spoke of the Executive Branch maintenance of the library, a small collection of classified and unclassified documents and publications. This unit controls purchase of books by the 513th for ACSI or USAREUR. Contact with the Foreign Service Publications Officers is not maintained in any regular or coordinating sense.

3. Maj. Kingsley of Production Branch discussed requirements of three types: a) the USAREUR Intelligence Collection Guide (ICD - long range or standing requirements); b) Specific Requests for Information (SRI - of about six months duration); c) Guidance Letters (elaborating on the ICD). Responsive reporting dissemination is determined by USAREUR analysts who also prepare coded evaluation sheets for machine records used for administrative review in assessing collection activity. It was stated that lateral field dissemination of raw reports to other USIB agencies does occur extensively. Department of Army or other USIB agencies' requirements received are first routed to analysts who determine whether the requirement is already included in the ICD, or if not, whether it is valid and should be acted on. Last year 50% of the reports received from collection units were considered worth distributing to Washington as R-reports. They are now in the process of converting to the new DIA/SICR system: the ISC will be keyed to requirements; requirement numbers will be carried over for machine control in DIA; a USAREUR requirements register is being established; country codes used will be those of DIA, not those of the ISC. It was stated that since their mission is to support CINC/USAREUR, there may be times when the priority given a requirement in DIA might be changed in the field to fit their mission.

4. Local ADP developments were discussed briefly by Lt. Col. Linden, who reviewed plans extending backward to 1957, culminating in a study (SEADOG) which included an interim system recommendation for USAREUR. ACSI was informed in April 62 of lack of capability to implement the proposed system. Part-time use of the Adjutant General's EAM equipment is made for personnel, security, and collection evaluation materials. One project (SALTINE) uses an IBM 1401 belonging to ASAE for extracts of

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priority one and two material. Use of the communication network for dissemination of reports in the field was successfully demonstrated in April 1962.

5. Maj. Cassell described in detail (with numerous graphics) the evaluation of collection. Responsive reporting, keyed to specific requirements, is punched, with a monthly statistical printout going to the DCSI. Analysts are captains and majors or GS-11's (GS-12 for CI reports). Seven thousand elements (not reports) were evaluated last year. The DCSI felt that this system has definitely paid off in providing tools for administrative reorientation of targeting, evaluating sources, etc.

6. Finally, Mr. Caplari described six specific data processing projects, as follows:

- a. GDR railships: information controlled on single card and heavily encoded; input of 200 cards/month, with monthly printout. Cards destroyed after a year.
- b. Tactical rail supply project: internal distribution only. Four hundred cards/month input.
- c. Air Reconnaissance (Stamp-pad): equipment sightings; six month data base. Locally-developed coding system used; involves trailer cards. Input is 3700 cards/month; monthly printout, cumulated semi-annually. Distributed to ACSI.
- d. GDR Installation (military): A listing to provide common identification base; assist in interrogations. Published once yearly and given Community distribution.
- e. GDR Organizations: includes FPN's and personalities.

SALTINE: essentially an early warning project using 120 priority indicators. Input 10-15 items daily to ASAE's 1401. Weekly printout with monthly cumulation. Still experimental - distribution internal only.

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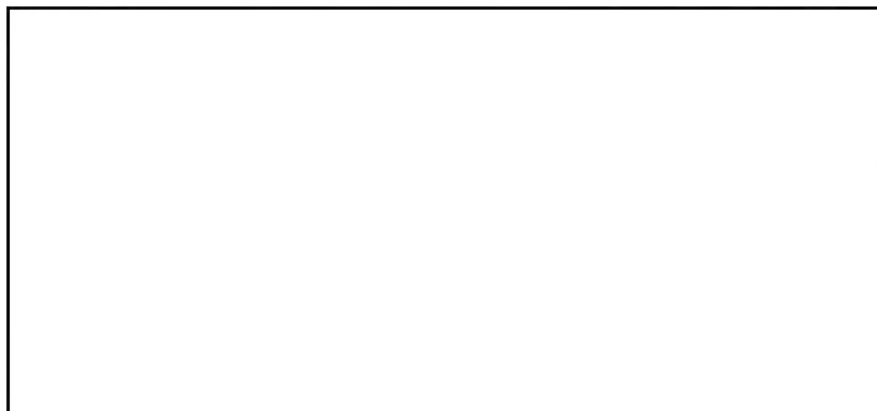
III. Hq USAFE, Wiesbaden

1. Army staff cars were again provided (as they had been for travel from Munich), to take the Group from Heidelberg to Wiesbaden arriving at about 1830 4 September; billeting was at the transient visitors' Hotel Von Steuben. Project Officer Maj. Hank Sanders (former CODIB and CODIB-predecessor organizations alternate member) got the Group to Lindsay Air Station's Targets Conference Room for what developed from a planned half-day to a full-day session.

2. Col. Robert Michaelis, Deputy Chief of Staff/Intelligence, after introductory words of welcome, summarized USAFE relations with others in the area, including friendly foreign services. He was followed by Col. Schneider, head of the Warning and Estimates Directorate (IAI), a group of 69 people divided into three divisions: Western, Military, and Warning. In addition to support of CINC/USAFE, IAI's products are specifically aimed at EUCOM and DIA requirements.

3. Col. Shaw (formerly of SAC and associated with 438L experimentation), now head of the Collection Directorate stated that 90% of their work was done for USIB components rather than the USAFE; resources are human, electronic and photographic. Human sources projects mentioned included EXTRA (American travelers to the Bloc) and NEW FRONTIER (reinterrogation of defectors, going back 15 years). Mechanization of requirements is beginning but is dependent on Hq EUCOM plans. There is no plan to mechanize responsive reporting - this being too vast. Lateral dissemination of field reporting was said to be made "as appropriate".

4. Lt. Col. Foley of AFSC spoke on the Foreign Technology Division (FTD) Detachment 3 activities. Projects in which they are involved include the following:

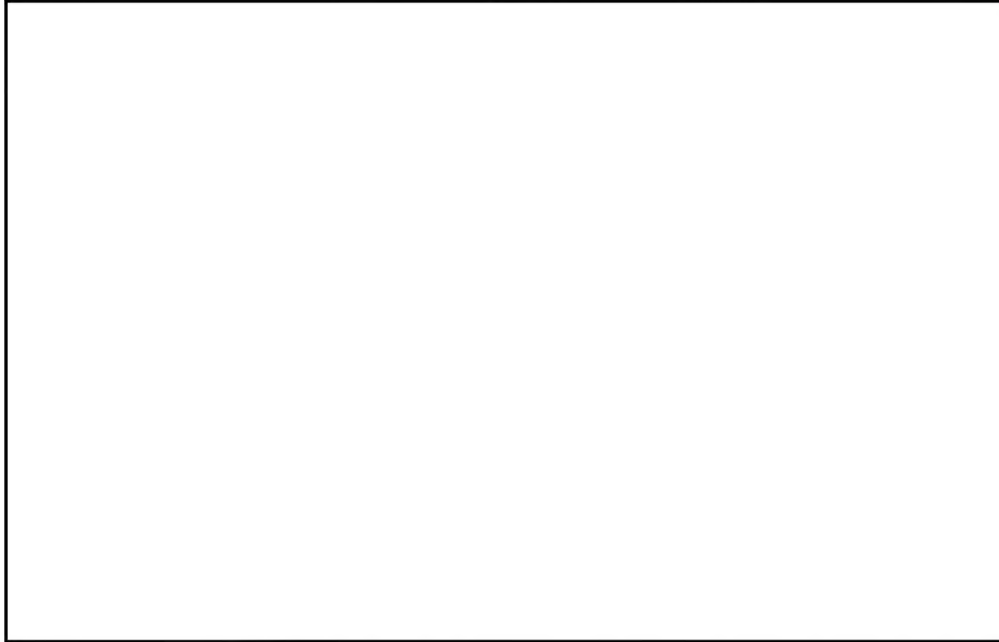


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5. Lt. Col. Glass of the Targeting Directorate described methods of receipt, posting and transmittal of targeting information, including pipelines to J-2 EUCOM and SHAPE. Card decks are maintained in a data base of some 2000 targets. Photo data is incorporated in UNIFILE format.

6. Col. Jensen heads the new Data Processing Directorate, now three months old; it was described by Major Sanders. An IBM 1410 with six tape units and 1301 random access module is to be installed in January 1963. An outlay [] was necessary to provide for tie-in with the special intelligence area. They do not plan to do indexing of documents; they do plan to get machine indexes from Washington or elsewhere in the U.S.

7. Mr. LaMontagne of IBM (also with 438L experience) outlined the contractor work statement for the Data Processing Directorate as follows: a) investigate present all-source data handling within the DCSI; b) recommend more efficient exploitation of resources within DCSI; c) recommend techniques for acceptance of new or modified intelligence inputs; d) plan for increased utilization of the voluminous data in the 6901st; e) plan for more effective utilization of material from the 7000th SW (now ISC coded); f) create all-source data base; g) mechanize OB's; h) plan for automatic preparation of reports; i) prepare schedules. It was stressed that all this is not for intelligence system design but specific operational problem solving. IBM, it was learned, has the exclusive ADP contractor role for Air Force in Europe.

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8. Finally, the Group was briefed by Dr. Mills on the ELINT Center; took a brief walk through the computer facility of the Data System and Statistics (Admin) component; and at about 1700 wound up the CODIB-phase of the trip, each proceeding on his own back to Washington or off on other business. Messrs. Borel and Dyer, accompanied by Col. Michaelis, paid a courtesy call on Lt. Gen. Montgomery, Deputy CINC/USAFE. Col. Gibbons, formerly of FTD now assigned to USAFE, also spent full-time with the Group.

IV. Hq. EUCOM Briefing, Paris

25X1 1. Messrs. [] flew to Paris on 6 September for a briefing by J-2/EUCOM at Camp DeLoges on their plans for a study of information processing activities across-the-board in DOD components in the European Theater. Since several of the CODIB members were present at a EUCOM seminar in Frankfurt during the week of 20 August in which plans for the EUCOM study were kicked-off, no detailed comment will be made.

25X1 2. Col. Sherrod, USAF, J-2/EUCOM, with whom arrangements for the [] visit had been made, had been called to Frankfurt hence his deputy, Col. Baumgardner, USAF, who is also Chairman of the Steering Committee conducting the EUCOM study, served as the project officer for the briefing; introduced Col. Northam, USA, newly arrived Deputy J-2; called the Steering Committee together to meet with the visitors; and went out of his way to be helpful. Two hours to one-half day had been expected with EUCOM; actually the Steering Committee (Cols. Baumgardner, Statter (USA), Keller (USAF), Shockey (USA); Capt. McGowan (USN); Lt. Col. Casey (USAF/WAF); Maj. Seymour (USA); and Cdr. Kearns (USN)) spent the full day with the travelers.

25X1 3. The morning and early afternoon were devoted, at the Committee's request, to a briefing by [] on SCIPS experiences and procedures to date. Considerable discussion and questioning ensued, the consensus being that in view of the tight EUCOM deadline for completion of the study (1 Nov 62), there was probably little now that the SCIPS effort could contribute to them, but that their investigations would probably benefit SCIPS. Col. Baumgardner said they would welcome SCIPS representatives for subsequent detailed discussions and field survey.

4. Col. Sherwood did most of the briefing on the EUCOM study plans. He said that they had organized several part-time Working Groups, each chaired by a member of the full-time Steering Committee, as follows:

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a) Requirements and Collection (Col. Shockey, USAREUR); b) Current Intelligence and Indications (Col. Baumgardner); c) Targets (Capt. McGowan, USN); d) Data Base (Lt. Col. Casey); e) SIGINT (Mr. Fordham, ASAE).

5. Fact-gathering on file holdings, formats, and procedures in Hq. EUCOM, each Command, and subordinate components is now under way. Of specific interest is duplication in file holdings, if any, as well as duplication in processing. An estimated 10,000 file format returns are expected. A command decision on the data base is expected prior to proceeding with the rest of the study; a centralized data base in Hq. EUCOM is not planned. A decision on the degree of mechanization required and the phasing of such will be made.

6. Prior to disbanding, Col. Baumgardner stressed the importance of attention to the damage assessment problem. Col. Sherwood asked for (and has now been sent, via the CODIB J-2 representative) six copies of CODIB-AR-4 for the Steering Committee. He was also interested in the recent USIB policy on machine-language data base establishment (USIB-D-39.5/14, 25 Jun 62) and on any Joint Staff or DIA current activity in report format standardization; these two items he planned to pursue through J-2 channels. This then ended the trip, [] going on to London - [] returning to Washington.

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